

What is claimed is:

1. A code division multiple access (CDMA) communication system using a common frequency band at a forward channel and a reverse channel, said CDMA communication system comprising:

first detecting means for detecting traffic in said reverse channel to produce a first detected signal indicative of the traffic in said reverse channel;

first assigning means for assigning reverse spreading codes to said reverse channel, said first assigning means making, in response to said first detected signal, number of said reverse spreading codes change;

second detecting means for detecting traffic in said forward channel to produce a second detected signal indicative of the traffic in said forward channel; and

second assigning means for assigning forward spreading codes to said forward channel, said second assigning means making, in response to said second detected signal, number of said forward spreading code change.

2. A CDMA communication system as claimed in claim 1, wherein said CDMA communication system is a frequency hopping system.

3. A CDMA communication system as claimed in claim 1, wherein said CDMA communication system is a direct sequence system.

4. A CDMA communication system as claimed in claim 1, wherein said first assigning means increases number of said reverse spreading codes when the traffic in said reverse channel is much, said first assigning means decreasing the number of said reverse spreading codes when the traffic in said reverse channel is little.

5. A CDMA communication system as claimed in claim 1, wherein said second assigning means increases number of said forward spreading codes when the traffic in said forward channel is much, said second assigning means decreasing the number of said forward spreading codes when the

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traffic in said forward channel is little.

6. A code division multiple access (CDMA) communication method using a common frequency band at a forward channel and a reverse channel, said CDMA communication method comprising the steps of:

detecting traffic in said reverse channel to produce a first detected signal indicative of the traffic in said reverse channel;

assigning reverse spreading codes to said reverse channel to make, in response to said first detected signal, number of said reverse spreading codes change;

detecting traffic in said forward channel to produce a second detected signal indicative of the traffic in said forward channel; and

assigning forward spreading codes to said forward channel to make, in response to said second detected signal, number of said forward spreading code change.

7. A CDMA communication method as claimed in claim 6, wherein said CDMA communication method is carried out in a frequency hopping system.

8. A CDMA communication method as claimed in claim 6, wherein said CDMA communication system is carried out in a direct sequence system.

9. A CDMA communication method as claimed in claim 6, wherein the step of assigning said reverse spreading codes increases number of said reverse spreading codes when the traffic in said reverse channel is much, the step of assigning said reverse spreading codes decreasing the number of said reverse spreading codes when the traffic in said reverse channel is little.

10. A method as claimed in claim 6, wherein the step of assigning said forward spreading codes increases number of said forward spreading codes when the traffic in said forward channel is much, the step of assigning said forward spreading codes decreasing the number of said forward

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spreading codes when the traffic in said forward channel is little.

11. A code division multiple access (CDMA) communication system comprising a mobile station and a base station which communicate with each other using a common frequency band at a forward channel and a reverse channel,

said mobile station comprising:

mobile detecting means for detecting traffic in said reverse channel to produce a reverse traffic detected signal indicative of the traffic in said reverse channel; and

mobile assigning means for assigning reverse spreading codes to said reverse channel, said mobile assigning means making, in response to said reverse traffic detected signal, the number of said reverse spreading codes change,

said base station comprising:

base detecting means for detecting traffic in said forward channel to produce a forward traffic detected signal indicative of the traffic in said forward channel; and

base assigning means for assigning forward spreading codes to said forward channel, said base assigning means making, in response to said forward traffic detected signal, the number of said forward spreading code change.

12. A CDMA communication system as claimed in claim 11, wherein said CDMA communication system is a frequency hopping system.

13. A CDMA communication system as claimed in claim 11, wherein said CDMA communication system is a direct sequence system.

14. A CDMA communication system as claimed in claim 11, wherein said mobile assigning means increases number of said reverse spreading codes when the traffic in said reverse channel is much, said mobile assigning means decreasing the number of said reverse spreading codes when

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the traffic in said reverse channel is little.

15. A CDMA communication system as claimed in claim 11, wherein said base assigning means increases number of said forward spreading codes when the traffic in said forward channel is much, said base assigning means decreasing the number of said forward spreading codes when the traffic in said forward channel is little.

16. A method of communicating between a mobile station and a base station in a code division multiple access (CDMA) communication system using a common frequency band at a forward channel and a reverse channel, said method comprising the steps of:

detecting, in said mobile station, traffic in said reverse channel to produce a reverse traffic detected signal indicative of the traffic in said reverse channel;

assigning, in said mobile station, reverse spreading codes to said reverse channel to make, in response to said reverse traffic detected signal, number of said reverse spreading codes change;

detecting, in said base station, traffic in said forward channel to produce a forward traffic detected signal indicative of the traffic in said forward channel; and

assigning, in said base station, forward spreading codes to said forward channel to make, in response to said forward traffic detected signal, number of said forward spreading code change.

17. A method as claimed in claim 16, wherein said CDMA communication system is a frequency hopping system.

18. A method as claimed in claim 16, wherein said CDMA communication system is a direct sequence system.

19. A method as claimed in claim 16, wherein the step of assigning said reverse spreading codes increases number of said reverse spreading codes when the traffic in said reverse channel is much, the step of assigning

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said reverse spreading codes decreasing the number of said reverse spreading codes when the traffic in said reverse channel is little.

20. A method as claimed in claim 16, wherein the step of assigning said forward spreading codes increases number of said forward spreading codes when the traffic in said forward channel is much, the step of assigning said forward spreading codes decreasing the number of said forward spreading codes when the traffic in said forward channel is little.

21. A mobile station for use in a code division multiple access (CDMA) communication system comprising a base station which communicates with said mobile station using a common frequency band at a forward channel and a reverse channel, said mobile station comprising:

detecting means for detecting traffic in said reverse channel to produce a detected signal indicative of the traffic in said reverse channel; and
assigning means for assigning reverse spreading codes to said reverse channel, said assigning means making, in response to said detected signal, the number of said reverse spreading codes change.

22. A mobile station as claimed in claim 21, wherein said CDMA communication system is a frequency hopping system.

23. A mobile station as claimed in claim 21, wherein said CDMA communication system is a direct sequence system.

24. A mobile station as claimed in claim 21, wherein said assigning means increases number of said reverse spreading codes when the traffic in said reverse channel is much, said assigning means decreasing the number of said reverse spreading codes when the traffic in said reverse channel is little.

25. A base station for use in a code division multiple access (CDMA) communication system comprising a mobile station which communicates with said base station using a common frequency band at a forward channel and a reverse channel, said base station comprising:

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detecting means for detecting traffic in said forward channel to produce a detected signal indicative of the traffic in said forward channel; and

assigning means for assigning forward spreading codes to said forward channel, said assigning means making, in response to said forward traffic detected signal, the number of said forward spreading code change.

26. A base station as claimed in claim 25, wherein said CDMA communication system is a frequency hopping system.

27. A base station as claimed in claim 25, wherein said CDMA communication system is a direct sequence system.

28. A base station as claimed in claim 25, wherein said assigning means increases number of said forward spreading codes when the traffic in said forward channel is much, said assigning means decreasing the number of said forward spreading codes when the traffic in said forward channel is little.

29. A method of assigning reverse spreading codes in a mobile station for use in a code division multiple access (CDMA) communication system using a common frequency band at a forward channel and a reverse channel, said method comprising the steps of:

detecting traffic in said reverse channel to produce a detected signal indicative of the traffic in said reverse channel; and

assigning, in response to said detected signal, said reverse spreading codes to said reverse channel so as to make number of said reverse spreading codes change.

30. A method as claimed in claim 29, wherein said CDMA communication system is a frequency hopping system.

31. A method as claimed in claim 29, wherein said CDMA communication system is a direct sequence system.

32. A method as claimed in claim 29, wherein the step of assigning said reverse spreading codes increases number of said reverse spreading

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codes when the traffic in said reverse channel is much, the step of assigning said reverse spreading codes decreasing the number of said reverse spreading codes when the traffic in said reverse channel is little.

33. A method of assigning forward spreading codes in a base station for use in a code division multiple access (CDMA) communication system using a common frequency band at a forward channel and a reverse channel, said method comprising the steps of:

detecting traffic in said forward channel to produce a detected signal indicative of the traffic in said forward channel; and

assigning, in response to said detected signal, said forward spreading codes to said forward channel so as make number of said forward spreading code change.

34. A method as claimed in claim 33, wherein said CDMA communication system is a frequency hopping system.

35. A method as claimed in claim 33, wherein said CDMA communication system is a direct sequence system.

36. A method as claimed in claim 33, wherein the step of assigning said forward spreading codes increases number of said forward spreading codes when the traffic in said forward channel is much, the step of assigning said forward spreading codes decreasing the number of said forward spreading codes when the traffic in said forward channel is little.

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